Introduction

Benefits of Retail Consolidation

In 50 years, the prolonged stock market boom of the 1990s will be remembered for many things, not least of which is the crest of the largest wave of merger and acquisition activity in history. Virtually every sector of the economy experienced massive consolidation as companies used inflated share values as currency in buyout after buyout. The retail grocery industry was no exception. Between 1996 and 1999, there were 385 mergers in the grocery industry and the acquired firms in these transactions had over $67 billion in annual sales. Whereas the top eight grocery firms had a national market share of 26 percent in 1987, their proportion of total grocery sales rose to 37 percent by 2000. In general, shareholders applauded each transaction and awarded consolidation with higher and higher valuations, firmly believing management's claims of unlocking greater efficiencies in purchasing and a larger presence in retail markets. However, few consider exactly what these "efficiencies" mean for suppliers upstream and consumers downstream from the merged retailers. If produce retailers truly are reaping efficiencies as a result of these mergers, then society as a whole is better off as produce will sell for less and stores will find that they must keep a stock of the best-quality produce or risk losing customers. However, if consolidation facilitates imperfectly competitive behavior, then the economic performance of the fresh produce marketing channel may indeed be impaired.

Evidence of Imperfect Competition

Evidence of such poor performance is, however, difficult to come by. It is now commonly recognized among economists that a certain industry structure does not necessarily imply a particular mode of conduct, nor a given level of performance when benchmarked against the competitive ideal (Geroski). However, because structure is more readily observable than either conduct or performance, it is necessary to have methods of obtaining evidence from available data that are widely accepted, rigorous, and consistent with the way in which prices and other decision variables are generated in the real world. Although anecdotal evidence of unfairness nearly always arises when an outcome is subject to negotiation and relative bargaining strength, such evidence hardly provides a sufficient basis upon which to justify intervening in an otherwise free marketplace. The weakness of anecdotal evidence is particularly apparent when a bargaining situation does not necessarily result in observable outcomes, such as market prices or shipment-orders, but rather side-payments or incentives that are maintained as proprietary corporate information. Consequently, it is necessary to apply statistical methods of acquiring evidence from data that are readily observable in order to assess the competitiveness of a given industry.

Buying and Selling Market Power

Unlike traditional agricultural commodities such as grain, cotton, or cattle, fresh fruits and vegetables are generally not used as inputs to further processing by their buyer. Rather, because the channel is commonly more direct between the grower-shipper and the ultimate consumer, deviations from perfectly competitive behavior may appear on either (or both) of two levels: on the supplier/buying side or on the output/retail selling side.[2] In either case, market power may be evident in either prices that are higher (lower) to consumers (shippers) than in competition or through some form of a rent extraction mechanism such as side or off-invoice payments. While evidence of the former lies in readily observable market prices, evidence of the latter tends to be of a weaker, anecdotal form. Indeed, one of the most important implications of this work is that if government antitrust agencies are truly concerned with these practices, they need to develop some method of acquiring the appropriate data on their use. With regard to the former question, however, pricing strategies by produce buyers are likely to depend critically upon the nature of the specific commodity in question.

Perishable Versus Semi-Perishable

If retailers with market power can either offer noncompetitive prices or offer competitive prices but with some form of off-invoice payment expected from the grower, then we must examine the motives and posit the likelihood of both strategies if real-world pricing data are to have any resonance. Because a buyer's incentive to pay competitive per-unit prices and levy an off-invoice fee (the latter strategy) rises the more responsive is supply to price changes, we expect to see imperfectly competitive or monopsony pricing the less responsive is industry supply. Clearly, with a relatively

[2] Typically, 43 percent of fresh produce is marketed directly from growers to retailers; larger retailers (those with annual sales greater than $1.5 billion) may obtain 66 percent of their supplies directly from growers.

fixed (inelastic) supply, retailers can reduce the prices they pay by a relatively large amount before suppliers are no longer willing to bring their goods to market. If supply is highly responsive (elastic), on the other hand, then a similar pricing strategy will mean that retailers are left with little to sell to consumers and their total profit falls accordingly.

In fact, the distinction between elastic and inelastically supplied fruits and vegetables underlies the two distinctly different modeling strategies that appear in other studies of imperfect competition in fresh produce markets (see also Sexton, Zhang, and Chalfant). Whereas we are more likely to see evidence of some degree of monopsony pricing among the highly perishable commodities (tomatoes and lettuce, for example), the opposite is true for goods that are semi-storable and, hence, more elastic in supply.[3] Apples, oranges, grapefruit, and table grapes can each, to a differing extent, be kept on hand until prices are more favorable. In this case, buyers may be more likely to offer competitive prices, but then extract producer profits through some form of a fixed fee. From a social perspective, this outcome is more desirable than the first because consumers are not deprived of a commodity that they would have otherwise bought at market prices. Empirical evidence of either competitive or noncompetitive pricing in fresh produce is, however, virtually nonexistent.

Objectives of Study

We hope to determine whether retailers are able to exercise market power in either their produce buying or selling activities. Because produce markets typically differ substantially on the basis of both geography and commodity, our empirical example considers a number of products and retail markets. Namely, we examine the markets for apples, grapes, fresh oranges, and fresh grapefruit in six regionally disparate retail markets - Albany, Atlanta, Chicago, Dallas, Los Angeles, and Miami. Prior to describing the logic underlying the empirical approach we apply, however, the report begins with a consideration of three key issues in any analysis of commodity pricing: (1) the locus of price determination, (2) the symmetry of retail price adjustment to upward and downward farm price movements, and (3) the "fixity" of retail prices. These issues concern exactly who "sets" fruit prices in the U.S. and how responsive they are to changes in underlying forces of supply and demand. This section also describes in some detail the data used in this study, and the possible limitations it presents for the study of market power.

The next section uses the results of this preliminary data analysis to develop an economic model of retail and grower-level fresh fruit pricing that allows for the possibility that retailers exercise market power in both their buying and retail selling activities. By allowing the degree of market power to vary with supply, we test hypotheses regarding the relative importance of scarcity and retailer marketing strategies such as category management and periodic price promotions.

The report concludes by drawing some implications for the conduct of retail buyers and suppliers of fresh fruit. This section also identifies some of the key issues that remain to be resolved in understanding the efficiency with which produce prices are formed and whether or not retail concentration—if it, in fact, contributes to the exercise of market power—is necessarily to be feared on the basis of pricing evidence alone.

[3] As a reviewer notes, the relationship between storability and elasticity is not one-to-one, but it is clear that on a weekly basis suppliers have far more alternatives for their output if it is potentially storable, exportable or otherwise withheld from the market.